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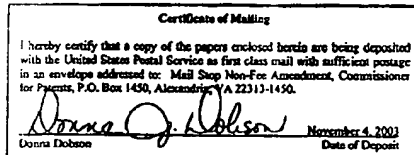


PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Axel Demail Confirmation No.: 2268
Serial No.: 09/937,425
Filed: January 24, 2002
Group Art Unit: 1711
Examiner: Nathan M. Nutter
Title: POLYPROPYLENE FIBERS

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450



Sir:

AMENDMENT

This amendment is filed in response to the office action mailed August 4, 2003.

11/18/2003 ASELNMAN 00000002 121781 09937425

1 FC:1202 11/23/03 108.00 CR
2 FC:1203 290.00 CR

Adjustment date: 07/15/2004 EEKUBAY1
11/18/2003 ASELNMAN 00000002 121781 09937425
01 FC:1202 108.00 CR
02 FC:1203 290.00 CR

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May 11, 2004

Mail Stop 16
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Re: U.S. Patent Application No. 09/937,425 (Demain)
For "POLYPROPYLENE FIBERS"
Group Art Unit 1711/ Nathan M. Nutter
Our Reference: 31223 / 81205

Dear Sirs:

Attached is the monthly statement dated November 28, 2003, on the Locke Liddell & Sapp LLP Deposit Account No. 12-1781 that shows two charges against our account for Serial No. 09/937,425, both on December 20, 2003. One charge was in the amount of \$108.00 for claims in excess of twenty and the other charge was in the amount of \$290.00 for multiple dependent claims. A response to the August 4, 2003 Office Action was filed on November 4, 2003 in which a single dependent claim was added and the Commissioner was requested to charge the \$18 fee for the additional claim for a large entity to our deposit account. A copy of the response as filed is enclosed for your reference. No additional fee was due for excess claims, nor were there any multiple dependent claims filed in the application.

It is respectfully requested that our Deposit Account No. 12-1781 be credited in the amount of ~~\$380.00~~, the \$290.00 fee for the multiple dependent claims and the \$90.00 difference between the amount charged for excess claims and the amount due.

Sincerely,



William D. Jackson

WDJ/dd
Enclosures

cc: Ms. LaKeisha Lister (Firm)



UNITED STATES
PATENT AND
TRADEMARK OFFICE

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11	25	03	16	75861534		9204	-150.00	15308.00
11	25	03	155	E-REPLENISHMENT		9203	-5197.00	20505.00
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31223 / 81205
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PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Axel Demail

Confirmation No.: 2268

Serial No.: 09/937,425

Filed: January 24, 2002

Group Art Unit: 1711

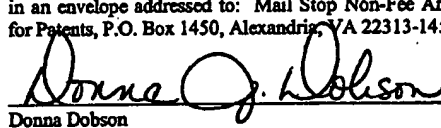
Examiner: Nathan M. Nutter

Title: POLYPROPYLENE FIBERS

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
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I hereby certify that a copy of the papers enclosed herein are being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Donna Dobson

November 4, 2003
Date of Deposit

Sir:

AMENDMENT

This amendment is filed in response to the office action mailed August 4, 2003.

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AMENDMENTS TO THE CLAIMS

1. (Original) A polypropylene blend including from 0.3 to 50% by weight of a syndiotactic polypropylene having a multimodal molecular weight distribution and at least 50% by weight of an isotactic polypropylene.

2. (Original) A blend according to claim 1 wherein the multimodal sPP concentration in the sPP/iPP blend is from 0.5 to 15 wt %.

3. (Original) A blend according to claim 2 wherein the multimodal sPP concentration in the sPP/iPP blend is from 1 to 10 wt %.

4. (Previously presented) A blend according to any foregoing claim 3 wherein the iPP is a homopolymer, copolymer or terpolymer of isotactic polypropylene.

5. (Previously presented) A blend according to any foregoing claim 1 wherein the iPP has a dispersion index (D) of from 3.5 to 9, preferably 3.5 to 6.5.

6. (Previously presented) A blend according to any foregoing claim 1 wherein the iPP has a melting temperature in the range of from 159 to 169°C.

7. (Previously presented) A blend according to any foregoing claim 4 to 6 wherein the iPP has an Mn of from 35,000 to 60,000 kDa.

8. (Previously presented) A blend according to any foregoing claim 7 wherein the iPP has a melt flow index (MFI) of from 1 to 90 g/10 mins.

9. (Previously presented) A blend according to any foregoing claim 6 wherein the multimodal sPP is a homopolymer or a random or block copolymer or a terpolymer.

10. (Previously presented) A blend according to any foregoing claim 6 wherein the multimodal sPP has a melting temperature of up to about 130°C.

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11. (Previously presented) A blend according to any foregoing claim 10 wherein the multimodal sPP has an MFI of from 0.1 to 100 g/10 min.

12. (Original) A blend according to claim 11 wherein the multimodal sPP has an MFI of from 1 to 60 g/10 min.

13. (Previously presented) A blend according to any foregoing claim 1 wherein the multimodal sPP has an Mn of from 35,000 to 40,000 kDa.

14. (Previously presented) A blend according to any foregoing claim 1 wherein the multimodal sPP has a dispersion index (D) of from 3 to 6.

15. (Previously presented) A blend according to any foregoing claim 1 wherein the multimodal sPP is bimodal.

16. (Previously presented) A spun polypropylene fiber produced from the polypropylene blend of any foregoing claim 1.

17. (Previously presented) A fabric produced from the polypropylene fiber according to claim 16.

18. (Original) A product including a fabric according to claim 17, the product being selected from a filter, personal wipe, diaper, feminine hygiene product, incontinence product, wound dressing, bandage, surgical gown, surgical drape and protective cover.

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19. (Previously presented) A process for producing polypropylene fibers by spinning a blend of syndiotactic polypropylene and isotactic polypropylene, wherein the blend has an enhanced spinning speed when producing spun polypropylene fibers by spinning a polypropylene blend, of from 0.3 to 50 wt % multimodal syndiotactic polypropylene in a blend with at least 50 wt % of an isotactic polypropylene.

20. (Previously presented) A blend according to claim 1 wherein the iPP has a dispersion index (D) of from 3.5 to 6.5.

21. (Previously presented) A blend according to claim 20 wherein the multimodal sPP concentration in the sPP/iPP blend is from 1 to 10 wt%.

22. (New) A blend according to claim 1 wherein said blend is a physical blend of said syndiotactic polypropylene and said isotactic polypropylene which are separately produced and then blended together.

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REMARKS

This application has been carefully reconsidered in view of the Office Action of August 4, 2003. Reconsideration and withdrawal of the restriction requirement of record is respectfully requested as set forth below. By this amendment, new dependent claim 22 has been added. Claim 22 depends from claim 1 and is directed to the embodiment of applicant's invention in which the syndiotactic polypropylene and isotactic polypropylene are separately produced and blended together in contrast to a reactor blend. Support for claim 22 is found in applicant's specification in the first full paragraph of page 7 and in the paragraph bridging pages 7 and 8 of applicant's specification. Reconsideration and allowance of this application is respectfully requested for the reasons set forth below.

The rejection of claims 1-15, 20 and 21 as anticipated by U.S. Patent No. 6,407,177 to Shamshoum et al. is respectfully traversed. It will be noted in the first instance that the patent to Shamshoum et al. fails to disclose the claimed subject matter which requires, in every claim, a blend incorporating a syndiotactic polypropylene having a multimodal molecular weight distribution blended with the isotactic polypropylene. The Shamshoum et al. reference has been carefully reviewed, particularly the portions thereof referred to specifically in the Office Action, and there clearly is no disclosure of a polymer blend incorporating syndiotactic polypropylene have a multimodal molecular weight distribution as set forth in claim 1. The Shamshoum reference not only fails to disclose a syndiotactic polypropylene having a multimodal weight distribution, but it would appear that the syndiotactic polypropylene in Shamshoum et al. is monomodal with a narrow molecular weight distribution. In this respect, the disclosure in Shamshoum et al. that the syndiotactic polypropylene-isotactic polypropylene blend there is prepared with a syndiospecific metallocene component and an isospecific Ziegler-Natta component of a multi-site catalyst system would lead one of ordinary skill in the art to expect a

syndiotactic polymer having a relatively narrow monomodal molecular weight distribution. This would be reinforced by the syndiospecific metallocenes as described in the patents referred to in column 4, lines 33-38 of Shamshoum et al. One of ordinary skill in the art would not expect syndiospecific metallocenes of this nature to produce syndiotactic polypropylene having multimodal molecular weight distribution. In this regard, attention is respectfully invited to U.S. Patent No. 6,265,512 to Siedle et al. and particularly to the discussion of syndiospecific metallocenes as found in the '512 patent in columns 3 and 4 and the symmetry of such catalysts, which as stated in column 15, lines 33-36, would produce molecular weight distributions which typically are monomodal.

In addition to the failure of Shamshoum et al. to anticipate applicant's independent claim 1 by virtue of its failure to disclose syndiotactic polypropylene having a multimodal molecular weight distribution, it is noted that applicant's dependent claims recite further features of the invention which are not found in the Shamshoum et al. reference. Specifically, it will be noted that Shamshoum et al. fails to disclose isotactic polypropylene having a melting temperature in the range of 159 to 169°C as set forth in claim 6, nor is there disclosed a multimodal syndiotactic polypropylene with a melting temperature of up to about 130°C as set forth in dependent claim 10. Further, the reference fails to disclose a dispersion index for the syndiotactic polypropylene of from 3 to 6 as set forth in dependent claim 14 or a dispersion index for the isotactic polypropylene of from 3.5 to 6.5, as set forth in dependent claim 20. In addition, the Shamshoum et al. reference clearly fails to disclose bimodal syndiotactic polypropylene as set forth in dependent claim 15. With respect to dependent claim 22, it will be noted that the Shamshoum reference specifies the formation of a reactor blend. This is in contrast to a physical blend as specifically called for in claim 22.

To the extent an issue may be raised with respect to application of the Shamshoum et al. reference to any claim under 35 U.S.C. §103, it is noted that such action would be lacking in compliance with the requirements of 35 U.S.C. §103(c) and the implementation of the statute as set forth in 37 CFR §1.104 and MPEP §706.02(1), §706.02(1)(2) and §706.02(1)(3). In this regard, it is noted that the Shamshoum et al. patent is assigned by a recorded assignment to Fina Technology, Inc. The above-identified application is assigned by a recorded assignment to ATOFINA Research. Fina Technology and ATOFINA Research are both wholly owned subsidiaries of Total S.A. Thus, the invention claimed in this application and the subject matter of the Shamshoum patent were, at the time the invention was made, owned by or subject to an obligation of assignment to the same person and should be so considered under the practice as set forth in MPEP §706.02(1)(2)(II), §706.02(1)(3) and §706(1)(3)(b).

Further, even if an issue of obviousness under 35 U.S.C. §103 were to become involved, attention is respectfully invited to the last full paragraph on page 7 of applicant's specification, which discusses the advantages involved in the use of syndiotactic polypropylene of multimodal molecular weight distribution as involved in the present invention. As shown in Table 2 found on page 10 of applicant's specification, under identical conditions, the use of bimodal syndiotactic polypropylene shows substantially improved results in terms of maximum spinning speeds at 260°C and 280°C when compared with the corresponding polymer blend incorporating monomodal syndiotactic polypropylene.

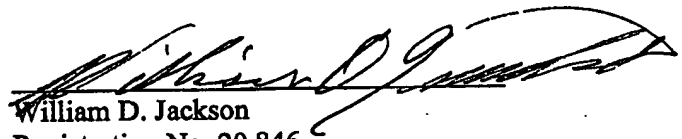
In regard to the restriction requirement, it is presumed that the reference in the Office Action to MPEP §1875(b) was intended to be made in reference to 37 CFR §1.475(b). It is noted that 37 CFR §1.475(b) addresses the issue of claims to different categories of inventions and the circumstances in which claims directed to such different combinations of categories may be

considered to have unity of invention. The claims of Groups I and II are not directed to different categories of invention and accordingly, the material referenced in the Office Action and the provisions of 37 CFR §1.475(b) would appear to be inapposite here. As noted in applicant's previous response of July 11, 2003, the claims of Groups I and II fall within the same category. They are not directed to different categories of invention as addressed in 37 CFR §1.475. It is also noted, as stated in applicant's previous response of July 11, 2003, that the reason advanced in the Office Action of May 12, 2003 in support of restriction involving claim 19 of Group III, "the blend recited is not the same in scope to the Group I composition" is no longer applicable.

For the foregoing reasons, it is respectfully that the claims herein are patentable over the prior art and accordingly, an early reconsideration and allowance of this application is respectfully requested.

The Commissioner is authorized to charge any fee required relative to the submission of this document to the Locke Liddell & Sapp LLP deposit account no. 12-1781.

Respectfully submitted,


William D. Jackson
Registration No. 20,846

Date: November 4, 2003

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